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ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)							DATE February 2000		
BUDGET ACTIVITY 3 - Advanced Technology Development				PE NUMBER AND TITLE 0603001A Warfighter Advanced Technology					
COST (In Thousands)	FY 1999 Actual	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	Cost to Complete	Total Cost
Total Program Element (PE) Cost	30322	44831	15469	17268	17232	22973	23999	Continuing	Continuing
DC07 Joint Service Combat Feeding Technology Demonstration	1925	2064	2167	2212	2274	2283	2396	Continuing	Continuing
DJ50 Future Warrior Technnology Integration	6587	6266	6308	7483	7772	12954	13056	Continuing	Continuing
D242 Airdrop Equipment	1212	1875	2330	2916	3547	3793	3976	Continuing	Continuing
D393 Military Operations in Urban Terrain	19853	20087	3874	3857	0	0	0	0	66969
D543 Ammunition Logistics	745	778	790	800	811	969	1598	Continuing	Continuing
D594 Metrology and Calibration	0	981	0	0	0	0	0	0	0
D557 Biosystems Technology	0	5885	0	0	0	0	0	0	0
DJ51 Combat ID for Dismounted Soldiers	0	6895	0	0	0	0	0	0	0
D545 Force Projection Logistics	0	0	0	0	2828	2974	2973	Continuing	Continuing
<p>A. Mission Description and Budget Item Justification: This program element demonstrates technology for the individual soldier that is essential to support and sustain wartime operations and peacetime readiness. The program’s purpose is to develop, demonstrate, and transfer affordable technologies to enhance dismounted soldier system performance and capabilities, reduce the logistics burden on the battlefield, reduce operation and sustainment (O&S) costs, and improve ammunition logistics system performance. The Joint Service Combat Feeding Technology project demonstrates technologies for food service systems and food products to include processing, preservation, packaging and equipment and energy technologies that improve field feeding, ration quality, and warfighter combat effectiveness. The Future Warrior Technology Integration project develops and demonstrates advanced technology components for insertion into the Land Warrior program and performs the integration of future soldier system technologies focused on improving soldier performance, lethality and survivability. The Airdrop Equipment project provides enhancements for rapid deployment required for dropping cargo to precise locations from higher altitudes, greater offset distances and higher speeds, resulting in increased survivability of aircraft and crews, and increased probability that materials delivered will land in a usable condition. The Military Operations in Urban Terrain (MOUT) Advanced Concept Technology Demonstration (ACTD) will identify, integrate, and demonstrate a system of systems approach of existing and emerging technologies to provide improved command, control, communications, computers and intelligence (C4I); engagement; and force protection for Soldiers and Marines operating in the restrictive urban environment. The Ammunition Logistics project demonstrates technology that optimizes weapon system rearm, ammunition packaging/palletization, explosives safety,</p>									
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material handling equipment, and ammunition throughput/management for improved munitions availability and survivability. Contractors performing the work for this PE include Tecogen, United Technologies, Giordano Automation, and InterVision. The work in this program element is consistent with the Army Science and Technology Master Plan (ASTMP) and the Army Modernization Plan. This program adheres to Tri-Service Reliance Agreements on clothing, textiles and food and explosive ordnance disposal with oversight and coordination provided by the Joint Directors of Laboratories and by the DoD Technology Area Review and Assessment (TARA) Review process. Work in this program element is related to and fully coordinated with efforts in PE 0602786A (Warfighter Technology), and Defense Advanced Research Projects Agency (DARPA) Small Unit Operations projects. The Ammunition Logistics project is related to PE 0602624A (Weapons and Munitions Technology) and PE 0603004A (Weapons and Munitions Advanced Development). These efforts contain no unwarranted duplication of effort among the Military Departments. The reduction from FY 2000 to FY2001 is due to the conclusion of the MOUT ACTD culminating demonstration.

B. Program Change Summary	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>
Previous President's Budget (<u>FY 2000/2001</u> PB)	30430	31287	16337
Appropriated Value	30669	45287	
Adjustments to Appropriated Value			
a. Congressional General Reductions	-239		
b. SBIR / STTR	-223		
c. Omnibus or Other Above Threshold Reductions		-146	
d. Below Threshold Reprogramming	+161		
e. Rescissions	-46	-310	
Adjustments to Budget Years Since (<u>FY 2000/2001</u> PB)			-868
Current Budget Submit (<u>FY 2001</u> PB)	30322	44831	15469

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BUDGET ACTIVITY 3 - Advanced Technology Development				PE NUMBER AND TITLE 0603001A Warfighter Advanced Technology				PROJECT DC07	
COST (In Thousands)	FY 1999 Actual	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	Cost to Complete	Total Cost
DC07 Joint Service Combat Feeding Technology Demonstration	1925	2064	2167	2212	2274	2283	2396	Continuing	Continuing
<p><u>Mission Description and Justification:</u> The goal of the Joint Service Combat Feeding Technology Demonstration project is to develop and demonstrate nutritionally advanced rations, biosensor technologies, and logistically streamlined combat feeding systems with enhanced fuel efficiencies to decrease the combat feeding logistics tail. The project focuses on demonstrations of advances in combat rations technology, materials, energy utilization, and heating technologies to provide efficient and effective field feeding without resupply. It exploits advances in ration formulation and quality, packaging, preservation, and nutritional content to improve morale, extend endurance, and sharpen mental acuity. This project is a DoD program for which the Army has Executive Agent responsibility and is managed by the U.S. Army Natick Soldier Center, Natick, MA.</p> <p>FY 1999 Accomplishments:</p> <ul style="list-style-type: none"> • 1159 - Completed design and fabricated Central Heat Unit Cogeneration Kitchen (CHUCK wagon) featuring thermal fluid heat transfer and integral cogenerator; demonstrated CHUCK wagon's potential as a revolutionary technology concept for future Army field feeding systems; demonstrated increased mobility (High Mobility Multi-Purpose Wheeled Vehicle vs. 2 ½ ton truck), 50% decrease in fuel consumption, ease of use, and ability to prepare higher quality meals faster and cheaper than current kitchens; transitioned CHUCK wagon technology to Program Definition and Risk Reduction. • 766 - Developed and demonstrated producibility of interactive packaging technologies and quantified the effects of interactive packaging on improving ration acceptance, while decreasing weight/volume of packaged rations. <ul style="list-style-type: none"> - Modeled the positive effects of incremental differences in carbohydrate sources on mission effectiveness and completion. - Demonstrated, in collaboration with the United States Department of Agriculture (USDA), revolutionary shock wave technologies, for processing meat items for combat rations with improved sensory qualities. - Identified commercial and developmental items and initiated acceptance and storage testing to support an expanded family of novel, shelf-stable breakfast items for on-demand combat field feeding. <p>Total 1925</p> <p>FY 2000 Planned Program:</p> <ul style="list-style-type: none"> • 812 - Conduct studies to evaluate different classes of ethylene inhibiting and blocking products to extend the shelf-life of fresh fruits and vegetables for military feeding systems. <ul style="list-style-type: none"> - Complete product acceptance and shelf-life studies on family of novel, shelf-stable breakfast items for combat rations; complete menu design. - Develop and demonstrate formulas and evaluate packaging alternatives for improved shelf-stable pouch bread. - Complete demonstration of interactive packaging technologies which maintain initial ration component quality while extending shelf-life, and transition to fielded ration systems. 									
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<p>FY 2000 Planned Program: (continued)</p> <ul style="list-style-type: none"> <div>687</div> <div>- Complete interactive studies of potential packaging films for irradiated foods and support development of additional American Society of Testing and Materials (ASTM) standards.</div> <div>- Develop and complete field demonstration of revolutionary radio frequency processed group ration components which significantly reduce degradative effects of conventional thermal processing, and coordinate with FDA and USDA for regulatory process approval.</div> <div>- Demonstrate the effects of acoustical matching with product type, packaging material, and hydrodynamic shock waves to improve meat component texture for combat ration optimization.</div> <div>537</div> <div>- Develop rudimentary modeling capability within the Integrated Unit Simulation System (IUSS - individual/small unit force-on-force model) to baseline an individual's "available energy" to perform select military tasks.</div> <div>- Conduct small-scale tech demo to downselect miniaturized biosensor probe to ensure microbiological/chemical safety of both fresh prepared and packaged rations, and prepare for user/field testing of the system.</div> <div>28</div> <div>- Small Business Innovation Research/Small Business Technology Transfer (SBIR/STTR).</div> <p>Total 2064</p> <p>FY 2001 Planned Program:</p> <ul style="list-style-type: none"> <div>720</div> <div>- Develop and integrate fuel reformer, fuel cell, and thermal fluid heat exchanger in field kitchens, and conduct technology demonstration to validate reduced fuel consumption, increased combustion efficiency, user safety and maximize equipment capabilities.</div> <div>- Develop and fabricate conceptual Self Heated Meals for Remote Site Feeding (reducing weight and cube by 80% over conventional system) and demonstrate to obtain user feedback/acceptance on ease-of-use, heat transfer and safety.</div> <div>1447</div> <div>- Demonstrate portable combat ration biosensor system for validating the wholesomeness and safety of combat rations, and transition to Veterinary Command.</div> <div>- Develop and evaluate prototype delivery systems to extend the shelf-life of fresh fruit and vegetables for military feeding systems reducing demand for replenishment supplies.</div> <div>- Extend the IUSS to dynamically track an individual's "level of fatigue" based on "available energy" minus energy expenditures (task performance) to optimize combat ration consumption.</div> <div>- Conduct testing for improved USAF tube foods for high altitude reconnaissance to maintain high levels of pilot cognitive skills.</div> <div>- Complete assessment of irradiated foods with enhanced safety to extend shelf-life, increase variety, and reduce weight and cube of combat rations.</div> <div>- Demonstrate improved pouch bread with warriors and transition to DLA.</div> <p>Total 2167</p>		
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BUDGET ACTIVITY 3 - Advanced Technology Development				PE NUMBER AND TITLE 0603001A Warfighter Advanced Technology				PROJECT DJ50	
COST (In Thousands)	FY 1999 Actual	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	Cost to Complete	Total Cost
DJ50 Future Warrior Technnnology Integration	6587	6266	6308	7483	7772	12954	13056	Continuing	Continuing
<p>Mission Description and Justification: The expanding mission of today's soldier requires that superior advanced technologies be integrated onto the soldier platform so that individuals and small units can be effective against all anticipated threats. The Land Warrior (LW) system will be the first ever fully integrated warrior system. This new system requires technology upgrades to maintain combat overmatch and to keep pace with the quickly moving electronics and computer industries. The Future Warrior Technology Integration project addresses the critical areas of weight, power requirements, fightability and cost of the Land Warrior system. In the near term, the Future Warrior Technology Integration project focuses on completing the maturation of integrated navigation, system voice control and LW combat identification into the LW system and on developing tethered hardware and software interfaces among LW, the Objective Individual Combat Weapon (OICW) and Javelin weapon systems. The Future Warrior Technology Integration project will utilize baseline LW systems to develop and demonstrate the following technology upgrades for transition as Pre-Planned Product Improvements: OICW and Javelin interfaces with less than three frame latency, an integrated medical monitoring system, and emerging commercial electronics and software that require 10% less power than the baseline LW. The project also will participate in Defense Advanced Research Projects Agency (DARPA) Small Unit Operations/Situation Awareness Systems (SUO/SAS) and Global Mobile Operations (GloMo) evaluations to measure SUO/SAS and GloMo technologies performance within the LW platform, transition the most viable technologies, and will demonstrate the viability of an advanced combat uniform system to include an integrated personal area network. This project is managed by the US Army Natick Soldier Center, Natick, MA.</p> <p>FY 1999 Accomplishments:</p> <ul style="list-style-type: none"> • 3294 - Assessed and developed future technology insertions into the Land Warrior system. <ul style="list-style-type: none"> - Built system voice control, integrated navigation, combat ID, enhanced soldier radio, and integrated sight components for the ITD, with some functionality limitations due to use of surrogate systems. - Completed Integrated Technology Demonstrations (ITDs) using surrogate Land Warrior Systems. • 1976 - Performed ITD of upgraded Land Warrior (surrogate) systems. <ul style="list-style-type: none"> - Prepared transition documents for other successful technologies. - Demonstrated future component integration onto the Land Warrior (surrogate) platform. • 1317 - Completed Future Warrior Architecture 2010 Analysis. <ul style="list-style-type: none"> - Defined warrior system concepts to reduce weight, power, cost and increase fightability. <p>Total 6587</p> <p>FY 2000 Planned Program:</p> <ul style="list-style-type: none"> • 3955 - Complete transition of system voice control, integrated navigation, and Land Warrior combat identification to the Land Warrior Engineering and Manufacturing Development (EMD) program. <ul style="list-style-type: none"> - Prepare transition documentation and complete planning and budgeting with appropriate PMs. 									
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BUDGET ACTIVITY 3 - Advanced Technology Development	PE NUMBER AND TITLE 0603001A Warfighter Advanced Technology	PROJECT DJ50
<p>FY 2000 Planned Program: (continued)</p> <ul style="list-style-type: none"> - Integrate new technology into Land Warrior platform and conduct demonstrations and user evaluations. - Identify DARPA Small Unit Operations (SUO) technologies for potential Land Warrior upgrades. • 2172 - Develop tethered Land Warrior interfaces with the Objective Individual Combat Weapon (OICW) and Javelin weapon systems. • 139 - Small Business Innovation Research/Small Business Technology Transfer (SBIR/STTR). Total 6266 <p>FY 2001 Planned Program:</p> <ul style="list-style-type: none"> • 3221 - Develop and integrate advanced technology upgrades (e.g., OICW and Javelin integration, medical monitoring, low power electronics and software, and advanced antennae), for Land Warrior systems. - Demonstrate and assess upgraded Land Warrior systems. - Perform user evaluations of upgraded systems. • 3087 - Perform experiments with emerging technologies from the 6.2 Lightweight Soldier program and related efforts to validate performance on Land Warrior systems. - Baseline performance of production quality Land Warrior systems to aid in technology investment decisions. - Begin development of advanced combat uniform (ACU) system. Total 6308 		
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BUDGET ACTIVITY 3 - Advanced Technology Development				PE NUMBER AND TITLE 0603001A Warfighter Advanced Technology				PROJECT D242	
COST (In Thousands)	FY 1999 Actual	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	Cost to Complete	Total Cost
D242 Airdrop Equipment	1212	1875	2330	2916	3547	3793	3976	Continuing	Continuing
<p><u>Mission Description and Justification:</u> This project focuses on the demonstration and development of equipment and innovative techniques for aerial delivery of cargo and personnel, a key capability for rapid force projection and global precision delivery, particularly into hostile areas as envisioned in Joint Vision 2010. The goal is precision delivery of payloads from extremely high altitude (up to 25,000 ft) and long offset distances. Delivery from high altitudes and large offset distances improves cargo/personnel and aircraft survivability. In the near-term, revolutionary technologies for the reliable precision guided delivery of combat essential munitions/sensors and equipment using high glide wing technology will be demonstrated, which incorporate a low cost, modular global positioning system (GPS) guidance package and control system. Specific near-term goal is a system capable of useable/desirable payload weights, a glide ratio of at least 6:1, and an optional glide augmentation system with a range of 75-300 km.</p> <p>FY 1999 Accomplishments:</p> <ul style="list-style-type: none"> • 1212 - Conducted flight testing of High Glide Air Delivery System for use in Air Delivery of cargo from an offset range of 75-300 km using an advanced guidance package and powered glide augmentation. - Conducted demonstration of precision high glide of a 2,000 lb. payload, with a goal of a 5,000 lb. payload, high glide wing. <p>Total 1212</p> <p>FY 2000 Planned Program:</p> <ul style="list-style-type: none"> • 1834 - Identify and analyze candidate systems for an efficient long range, 10,000 lb. payload autonomous airdrop resupply capability. • 41 - Small Business Innovation Research/Small Business Technology Transfer (SBIR/STTR). <p>Total 1875</p> <p>FY 2001 Planned Program:</p> <ul style="list-style-type: none"> • 2330 - Fabricate components and conduct scale model testing for the long-range autonomous "just in time" resupply airdrop system. - Analyze and design candidate integrated concepts for a pneumatic muscle/airbag landing system to provide a roll-on/roll-off quick airdrop capability for a 20,000 lb. payload. <p>Total 2330</p>									
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BUDGET ACTIVITY 3 - Advanced Technology Development				PE NUMBER AND TITLE 0603001A Warfighter Advanced Technology				PROJECT D393	
COST (In Thousands)	FY 1999 Actual	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	Cost to Complete	Total Cost
D393 Military Operations in Urban Terrain	19853	20087	3874	3857	0	0	0	0	66969
<p>Mission Description and Justification: This project conducts the integration of technology products into a "System of Systems", develops operational concepts and tactics/techniques/procedures (TTPs), and executes live experiments and simulations to determine the military utility of various technologies in enhancing military operational capabilities in the urban environment. The Military Operations in Urban Terrain (MOUT) Advanced Concept Technology Demonstration (ACTD) will integrate promising Commercial-off-the-Shelf (COTS), Government-off-the-Shelf (GOTS) products and technology products from on-going Army, Marine Corps and Defense Advanced Research Projects Agency (DARPA) programs to create the MOUT System of Systems. The objective is to improve the command, control, communications, computers and intelligence (C4I), engagement, force protection and mobility capabilities of soldiers and Marines, and ensure the effective interoperability of these capabilities in the particularly challenging urban environment. The program will transition to rapid and efficient acquisition and fielding of the value-added components following the completion of the ACTD culminating demonstration in FY2000. Hardware successfully demonstrating capabilities will be provided to operational units as an interim capability, including follow-on support, during FY2001/2002. The MOUT ACTD is a joint Army/Marine Corps program with participation from DARPA. This project is managed by U.S. Army Natick Soldier Center, Natick, MA.</p> <p>FY 1999 Accomplishments:</p> <ul style="list-style-type: none"> • 9453 - Implemented integration, interoperability assessments, and diagnoses of technology candidate products for the MOUT systems of systems. <li style="margin-left: 20px;">- Conducted modeling and simulation to quantify military utility of advanced technology hardware and software. <li style="margin-left: 20px;">- Assessed MOUT operational concepts and Tactics, Techniques and Procedures to determine effectiveness of new capability employment. • 10400 - Managed, coordinated, and executed the FY99 MOUT ACTD program. <li style="margin-left: 20px;">- Procured additional prototype hardware and software for use in MOUT ACTD experiments. <li style="margin-left: 20px;">- Conducted transition assessments of successful technologies; transitioned rifle launched entry munition capability to PM Small Arms. <li style="margin-left: 20px;">- Completed follow-on squad/platoon level MOUT experiments with prototype hardware. <li style="margin-left: 20px;">- Conducted joint MOUT company level experiments to ensure integration and interoperability of MOUT ACTD hardware and software. <p>Total 19853</p> <p>FY 2000 Planned Program:</p> <ul style="list-style-type: none"> • 7000 - Manage, coordinate and execute FY00 MOUT ACTD program. <li style="margin-left: 20px;">- Complete integration/modifications resulting from joint company experiments. <li style="margin-left: 20px;">- Conduct force effectiveness analyses to determine higher echelon impacts of individual soldier/small unit MOUT improvements. • 12546 - Complete New Equipment Training (NET), conduct NET, and support associated field training exercises using new MOUT ACTD technologies. <li style="margin-left: 20px;">- Deliver culminating demo hardware. <li style="margin-left: 20px;">- Conducted Advanced Concept Excursion to identify MOUT potential of emerging technologies (1Q FY00). 									
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BUDGET ACTIVITY 3 - Advanced Technology Development	PE NUMBER AND TITLE 0603001A Warfighter Advanced Technology	PROJECT D393
<p>FY 2000 Planned Program: (continued)</p> <ul style="list-style-type: none"> - Conduct MOUT ACTD culminating demonstration at Joint Readiness Training Center. - Finalize technology transition assessments. <p>• 541 - Small Business Innovation Research/Small Business Technology Transfer (SBIR/STTR).</p> <p>Total 20087</p> <p>FY 2001 Planned Program:</p> <ul style="list-style-type: none"> • 1733 - Complete transitions of successful MOUT ACTD technologies to Army acquisition programs. - Refurbish ACTD residual hardware. - Transition residual hardware to Army and USMC experimental forces units. - Conduct extended military utility and technical analyses and assessments of residual hardware. <p>• 2141 - Provide technical/engineering operations for residual hardware during extended evaluation phase.</p> <p>Total 3874</p>		
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BUDGET ACTIVITY 3 - Advanced Technology Development				PE NUMBER AND TITLE 0603001A Warfighter Advanced Technology				PROJECT D543	
COST (In Thousands)	FY 1999 Actual	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	Cost to Complete	Total Cost
D543 Ammunition Logistics	745	778	790	800	811	969	1598	Continuing	Continuing
<p><u>Mission Description and Justification:</u> This project develops technology that provides rapid munitions deployability, resupply, and rearm for the force projection Army. It enhances force readiness and reduces the logistics footprint through improvements in explosive safety, Materiel Handling Equipment (MHE), ammunition and missile packaging/palletization, and asset throughput/management. It also improves weapon system rearm for artillery, armor, air defense, aviation, and infantry. Emerging technologies and productivity enhancers/cost savers are exploited to provide quantum improvements to the force projection (strategic), in-theater (operational), and combat-focused (tactical) logistics systems. This project is managed by the U.S. Army Armament Research, Development, and Engineering Center, Picatinny Arsenal, NJ. Technology will transition to weapons and munitions development programs for weapons, munitions, MHE, and tactical vehicles.</p> <p>FY 1999 Accomplishments:</p> <ul style="list-style-type: none"> • 745 - Conducted full scale testing of a prototype rapidly deployable barrier and fire blocking system that improves the survivability of munitions storage areas and personnel. - Prepared data package for the rapidly deployable barrier and fire blocking systems. <p>Total 745</p> <p>FY 2000 Planned Program:</p> <ul style="list-style-type: none"> • 757 - Design and fabricate a prototype sensor and passive (battery-free) transceiver unit that will be embedded in advanced munitions for the Future Combat Systems armament system to provide asset visibility and expenditure rates for anticipatory resupply as well as internal temperature data used by the fire control system to improve armament system accuracy. Also, evaluate the ability to obtain the munition's temperature profile while sitting in chamber. - Develop a modular munitions packaging/logistics system concept for autonomous resupply/rearm of the Future Combat Systems in the field to reduce the logistics tail, greatly decrease rearm burden, and allow the Future Combat Systems more time on station. - Design a prototype battery powered micro-sensor based environmental sensor suite to provide remote munitions readiness prognostics and diagnostics for improved stockpile management/readiness and Total Asset Visibility. <p>21 Small Business Innovation Research/Small Business Technology Transfer Program</p> <p>Total 778</p> <p>FY 2001 Planned Program:</p> <ul style="list-style-type: none"> • 790 - Integrate discrete components and conduct full scale testing and demonstration of the embedded passive sensor for Future Combat Systems munitions. - Design conceptual munitions resupply module for the Future Combat Systems armament system. <p>Total 790</p>									
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BUDGET ACTIVITY 3 - Advanced Technology Development				PE NUMBER AND TITLE 0603001A Warfighter Advanced Technology				PROJECT D594	
COST (In Thousands)	FY 1999 Actual	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	Cost to Complete	Total Cost
D594 Metrology and Calibration	0	981	0	0	0	0	0	0	0
<p><u>Mission Description and Justification:</u> This one year Congressional special interest project enables the Army to develop and test new measurement technologies, which ensure the accuracy of essential Army measurement systems. This work supports key technology projects required to establish national calibration support and traceability for Army gas mask testers, microwave power calibrations and related instrumentation. This is a Joint Service program coordinated through the Joint Logistics Commanders. This project is managed by the U.S. Army Test Measurement and Diagnostic Equipment Activity, Redstone Arsenal, AL.</p> <p>FY 1999 Accomplishments: Project not funded in FY 1999.</p> <p>FY 2000 Planned Program:</p> <ul style="list-style-type: none"> • 955 Develop calibration systems for gas mask testers, microwave power calibrations and related instrumentation. • 26 Small Business Innovation Research/Small Business Technology Transfer. <p>Total 981</p> <p>FY 2001 Planned Program: Project not funded in FY 2001.</p>									

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COST (In Thousands)	FY 1999 Actual	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	Cost to Complete	Total Cost
D557 Biosystems Technology	0	5885	0	0	0	0	0	0	0
<p><u>Mission Description and Justification:</u> This Congressionally-mandated project has been previously funded in FY93 under project number A830 and in FY98 under project number A823. This project pursues science and technology biological systems research in conjunction with the United States Department of Agriculture Sustainable Economic Activity program. It supports the development of environmentally sensitive products and services essential for the efficient operation of all branches of the military and the civilian sector.</p> <p>FY 1999 Accomplishments: Project not funded in FY 1999</p> <p>FY 2000 Planned Program:</p> <ul style="list-style-type: none"> • 5727 Develop products for both the military and civilian sectors, utilizing the unique resources of tropical and sub-tropical regions. • 158 Small Business Innovation Research/Small Business Technology Transfer. <p>Total 5885</p> <p>FY 2001 Planned Program: Project not funded in FY 2001</p>									
<div style="display: flex; justify-content: space-between; padding: 10px;"> Project D557 Page 12 of 13 Pages Exhibit R-2A (PE 0603001A) </div>									

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BUDGET ACTIVITY 3 - Advanced Technology Development				PE NUMBER AND TITLE 0603001A Warfighter Advanced Technology				PROJECT DJ51	
COST (In Thousands)	FY 1999 Actual	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	Cost to Complete	Total Cost
DJ51 Combat ID for Dismounted Soldiers	0	6895	0	0	0	0	0	0	0
<p><u>Mission Description and Justification:</u> The Combat Identification for Dismounted Soldiers (CIDDS) program requested the funding transfer of OPA funds to RDTE Engineering and Manufacturing Development for non-recurring engineering efforts required to reduce the system weight, analyze integration issues, and optimize the design to meet the full-spectrum of Army missions. The funding was placed in PE 63001 in error and the necessary reprogramming efforts are underway to transfer the funds to PE 0604817A.</p> <p>FY 1999 Accomplishments: Program not funded in FY 1999</p> <p>FY 2000 Planned Program:</p> <ul style="list-style-type: none"> • 6895 Funding will be reprogrammed to Program Element 6.4817 in Engineering and Manufacturing Development (EMD). EMD will reduce the system weight, integrate the system, and optimize the overall design of the combat system for the various missions which dismounted soldiers perform. <p>Total 6895</p> <p>FY 2001 Planned Program: Program not funded in FY 2001.</p>									
<div style="display: flex; justify-content: space-between; padding: 10px;"> Project DJ51 Page 13 of 13 Pages Exhibit R-2A (PE 0603001A) </div>									